

REMARKS

Claims 5 and 14 through 17 remain in the case. New claim 18 has been added.

Claims 5 and 14 through 17 stand rejected under 35 USC 103(a) as unpatentable over Friese '007 in view of Tani, or Murata, or Gerblinger. Amended claim 5 now defines the ceramic substrate as a fired ceramic substrate and the ceramic cover layer as a fired ceramic cover layer. In addition, claim 5 has been amended to define that the connecting layer is produced by arranging the frame-like shaped glaze between the fired ceramic substrate and the fired ceramic cover layer and subjecting the glaze to a temperature treatment under application of pressure. This clearly distinguishes the claimed subject matter from the teachings of Friese. It should be noted that the claimed invention provides platinum temperature sensors allowing for reliable measurement results even in the case of continuous loads in a high temperature range. The Examiner avers that Friese shows the invention except for the platinum film resistor 6 being "thin film and the glass". However, according to Friese, a temperature sensor element is formed from a laminated composite of ceramic films in which a PTC thick-film resistor track is hermetically encapsulated (see Friese, column 3, lines 62-64 and column 7, lines 21-23). According to Friese, the ceramic films which are laminated and sintered together are ceramic green films. Friese clearly teaches that a plurality of ceramic green sheets are laminated and sintered together with a thick-film resistor track arranged therebetween. Thus, Friese is silent about a platinum temperature sensor in which a connecting layer is produced by arranging a frame-

like shaped glaze between a fired ceramic substrate and a fired ceramic cover layer and subjecting the glaze to a temperature treatment under application of pressure. Even if we assume for the sake of argument that YSZ (the material of which the sealing frames 4 and 4' of Friese are formed) represents a glaze comprising a glass, Friese is silent about arranging such a glaze between a fired ceramic substrate and a fired ceramic cover layer and subjecting the glaze to a temperature treatment under application of pressure. Thus, amended claim 5 is clearly patentable over Friese. Tani and Murata are cited for the proposition that platinum temperature sensing film may be thick or thin, whereas Gerblinger is cited to suggest that it would have been obvious to employ the glaze layer and the thin film resistor in the Friese device. One of ordinary skill would not make use of a thin-film resistor in connection with Friese's temperature sensor, which is formed by laminating together a number of ceramic green sheets. The reason is that it is simply not possible to realize the sensor of Friese including a thin-film resistor, since it is not possible to apply a thin-film having a sufficient thickness (to obtain required properties) onto a ceramic green sheet. Murata teaches a platinum temperature sensor having a plurality of stacked plate-type ceramic sheets which are integrally fired after being stacked. Clearly, without Applicant's direction, one of ordinary skill in the art would not pick and choose from the cited references to achieve Applicant's invention, as claimed. Thus claims 5 and 14 through 17 are not obvious from the cited references within the meaning of 35 USC 103(a).

Claims 5 and 14 through 17 also stand rejected under 35 USC 103(a) as unpatentable over Friese '007 in view of Tani, and further in view of Wienand. Wienand merely teaches high melting

glass solder, and an additional cover of glass for protection. Since the basic reference, Friese, is insufficient to render claim 5 unpatentable, as set forth above, and Wienand is totally silent about a ceramic green layer as a connecting layer, one of ordinary skill has no motivation to depart from the teaching of Wienand to make use of a glass solder to connect a substrate and a cover for high temperature applications. Thus claims 5 and 14 through 17 are not obvious from the cited references within the meaning of 35 USC 103(a).

Claims 16 and 17 stand rejected under 35 USC 103(a) as unpatentable over Friese '007 in view of Gerblinger, and further in view of Wienand. The Examiner avers that the invention is disclosed except the sealing cover being glass. However, since Friese is distinguished from the independent claim 5 for the reasons set forth above, the dependent claims are equally patentable therewith.

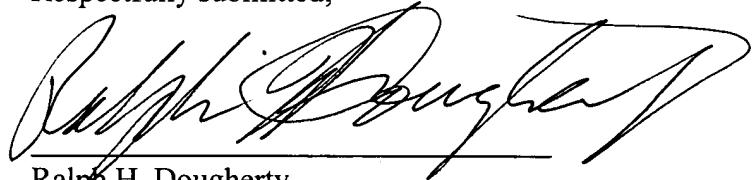
New claim 18 is presented in independent form which sets forth the method of making the platinum temperature sensor of claim 5, and is clearly patentable over the cited references for the reasons set forth above. Support for new claim 18 can be found in the original specification in the paragraph bridging pages 8 and 9 thereof.

Since the amendment to the claims does not add more claims than previously paid for, no additional fee is required.

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In view of the foregoing amendment and these remarks, this application is now believed to be in condition for allowance, and such action is respectfully requested on behalf of Applicant.

Respectfully submitted,



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